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I.—*On a Specimen of the Extinct Dromæus ater discovered in the Royal Zoological Museum, Florence.* By HENRY H. GIGLIOLI, H.M.B.O.U., F.M.Z.S., Director of the Museum.

ABOUT the 9th or the 10th of April, 1802, a French exploring expedition, consisting of the ships ‘Géographe,’ ‘Naturaliste,’ and ‘Casuarina,’ under the orders of Baudin, to which also were attached the well-known naturalist F. Péron and the able draughtsman Lesueur, sailed along the south coast of New Holland and discovered a large island, which they named “Isle Decrès.” It lies across the two deep indentations of the mainland now known as Encounter and St. Vincent Gulfs, opposite the mouth of the Murray River, and facing that fertile portion of the flourishing Colony of South Australia where the city of Adelaide now stands; then:

“Sterilis profundi vastitas squallet soli,
Et fœda tellus torpet æterno situ.”—SENECA.

This island is now well known under the name of Kangaroo Island, an appellation bestowed on it by Captain Flinders, who discovered it a few months before the arrival of Baudin’s expedition. On their first visit to the island the French explorers suffered from bad weather, hunger, and scurvy, and were unable to complete their exploration, being compelled to leave to get fresh provisions.

They returned at the end of 1802, and during the month of January 1803 the island was thoroughly explored. It was found to be arid, nearly devoid of water, and covered with scanty "bush." Not a single human being was met with, but the Frenchmen were struck with the large number of Kangaroos and Emeus living on that desolate spot: "On voyoit accourir du fond des bois de grandes troupes de Kangaroos et de Casoars, qui alloient demander à l'Océan une boisson que la Terre leur refusoit sans doute." And further on Péron writes: "Mais de tous les oiseaux que l'île Decrès reçut en partage de la Nature, les plus utiles à l'homme sont les Casoars: ces gros animaux paroissent exister sur l'île en troupes nombreuses; mais comme ils sont très agiles à la course, et que nous mêmes peu de soin à les chasser, nous ne pûmes nous en procurer que trois individus vivans."

Péron, in the narrative of the expedition, besides the above quotations, describes the Emeu found on Kangaroo Island; and in the accompanying Atlas gives a fair plate representing the male, female, and young*. The three living specimens captured on L'île Decrès were evidently hardy birds; they reached Paris safely on the return of Baudin's expedition in 1804, and were presented to the Emperor Napoleon. One was placed in the Menagerie at the Jardin des Plantes; the other two were sent to "La Malmaison," where the Empress Joséphine then held her court.

Two of these birds certainly lived until 1822, when one of them was mounted entire and placed in the Ornithological Gallery of the Parisian "Muséum"; the other was prepared as a skeleton, which was placed in the Comparative Anatomy department of the same Museum. I have examined both of them. The third specimen disappeared, or, at least, no mention is made of its ultimate fate; but of that anon.

Péron was evidently under the impression that his bird was identical with the "Casoar de la Nouvelle Hollande,"

* Péron et Freycinet, 'Voyage de découvertes aux Terres Australes, 1800-1804,' tome i. p. 326, tome ii. pp. 71-78: Atlas, pls. xxxvi., xli. (Paris, 1807-1816).

as *Dromæus novæ-hollandiæ* was then called ; and it does not seem quite certain who first discovered that there was a "Great" and a "Lesser" Emen. From a letter to 'Nature' by Prof. Alfred Newton, to which I shall refer later, it would appear that such a distinction was made in Bullock's Museum as early as 1812. Vieillot proposed the name which the small Emen now bears in 1817 (*Nouv. Dict.* x. p. 212), but he did not then properly define the species, being evidently, as is shown by what he wrote on the subject, under the impression that the smaller and darker specimens were birds which had not attained their full growth. It was, so far as I am aware, first thoroughly defined by Bonaparte as late as 1856 (*Comptes Rend.* xliii. p. 841. n. 5), when he gave full zoological and anatomical differential characters distinguishing *D. ater* from *D. novæ-hollandiæ*. Fuller details of the distinctive characters of *D. ater*, and an excellent coloured plate of the mounted specimen in the Paris Museum, were published thirty-seven years later by A. Milne-Edwards and E. Oustalet* ; a few further notes on the same bird, with sketches of the head from life by Lesueur, were published by the same authors in the 'Bulletin du Muséum d'Histoire Naturelle,' 1899, n. 5, p. 206. The most important point contained in these notes, based on MSS. of Lesueur now in the Museum at Havre, is that, previous to their visit to Kangaroo Island, viz. in December 1802, the French naturalists of Baudin's expedition landed and camped for some days on King Island, off the western entrance to Bass Straits. They found there six sealers headed by one Cowper, who showed them considerable attentions ; from him they learnt that a small dark "*Hemeo*," as the English name is spelled, or "*Casoar*," was so common on the island that Cowper asserted that he had himself killed 300. This easily explains how, through the agency of sealers and their dogs, the Emen on King Island soon became extinct ; it is quite possible that it was the Lesser one, *D. ater*, but that has not been proved.

* A. Milne-Edwards et E. Oustalet, "Notice sur quelques Espèces d'Oiseaux actuellement éteintes," etc., etc., in 'Volume commémoratif du Centenaire de la Fondation du Muséum,' p. 251, pl. v. (Paris, 1893).

This episode of Baudin's expedition shows how the extermination of *D. ater* on Kangaroo Island took place. I have been told that in the early days of South Australia a settler squatted on the island and that he deliberately made an end of the Lesser Emeu; but no date has been given, and we do not even know when the painful fact of the total extinction of this most interesting species was made patent to ornithologists; it was, however, not very long ago! The worst is that, so far as positive information goes, no specimens except those at Paris have been preserved; and this is in part a consequence of the general ignorance, until quite recently, of its specific distinction from the Emeu of the Australian main; even Gould, in his monumental work on 'The Birds of Australia,' gives *D. ater* as a synonym of *D. novæ-hollandiæ*. Thus I agree with the last official statement regarding *D. ater*, that of my friend Salvadori in his masterly work, volume xxvii. of the 'Catalogue of Birds in the British Museum,' p. 589: "*Hab.* Deerès or Kangaroo Island, but now extinct, and only known from a single stuffed specimen and the skeleton in the Paris Museum."

Many years ago my attention was called to a mounted skeleton of a Ratite in the old didactic collection of our Museum. It was not in first-rate condition, having some portions replaced by imitations in wood of the missing bones, and was remarkable for its small size. It is a three-toed form, certainly not a *Rhea*, and is labelled "*Casuario*"; but the skull is quite smooth above, there being not the slightest trace of the bony support of the horny helmet, and the bill is *depressed*, not compressed as in the Cassowaries. The specimen was kept apart in a store-room and used by students; every time I saw it I felt that it was a problem to be solved, and yet other and incessant occupations kept me from the attempt. And it was only last spring, during a visit of Mr. Walter Rothschild, on his telling me that he was working out the Cassowaries, that I remembered the enigmatical skeleton. A closer inspection showed us that it was without the least doubt a specimen of the extinct *Dromæus ater*.

Mr. Rothschild asked me to lend him the specimen,

and I willingly made an exception to our rules in his favour, as he is engaged on a nearly allied group, while I was also glad to give an opportunity of inspecting so rare a relic to my colleagues of the B.O.U., it being more accessible to them at Tring than in Florence. I sent a note to 'Nature' on the important discovery * and also made a communication on the same subject to the International Ornithological Congress at Paris in June last. My communication to 'Nature' called forth a short, but highly interesting, note from my learned friend Professor Alfred Newton †; from which we learn that so long ago as 1812 a "*Lesser*" and a "*Great Emea*" were recognized as distinct in Bullock's Museum, and that a specimen of each was preserved in that remarkable collection. Further that when Bullock's Museum was dispersed under the auctioneer's hammer in May 1819 the two birds were bought by the Linnean Society of London for £7 10s. and £10 10s. respectively. I quite agree with Professor Newton that the "*Lesser Emea*" was most probably a specimen of the unfortunate *D. ater*, and I am surprised that both specimens should have so entirely disappeared that Prof. Newton has in vain endeavoured to trace the smaller. If found and identified according to our suppositions, it would stand as the *fourth* known specimen of *D. ater*. Professor Newton concludes by saying that it may still exist unrecognised; and this lack of recognition of a most distinct species for nearly a century is the corner-stone and basis of the sad history of the Lesser Emeu. I may here remark that even Professor Newton, in whom I hail the most erudite of living ornithologists and the highest authority on lately extinct birds, had up to a recent date not recognised this species. In his excellent 'Dictionary of Birds' (part i. p. 214: London, 1893) he gives us sad news regarding the imminent extermination of the larger Emeu, and tells us how it was totally destroyed in Tasmania and is said to have once existed on the islands of Bass Straits; but he makes no mention of *D. ater*, and gives

* 'Nature,' vol. lxii. p. 102 (London, May 31, 1900).

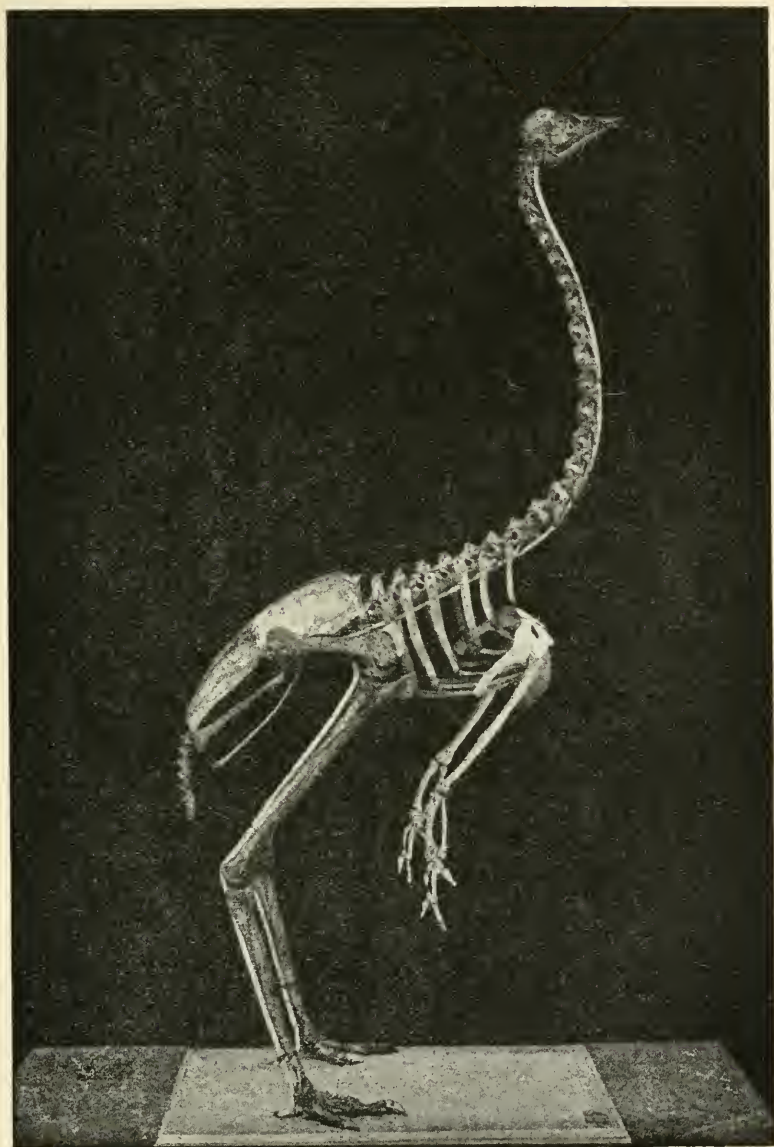
† *Tom. cit.* p. 151 (London, June 14, 1900).

a note criticizing Latham's distinction of a "*Van Diemen's Cassowary*," which, from what little we know about it, may possibly have been specifically identical with the bird Péron found so abundant on Kangaroo Island.

But returning to the Florence specimen of *Dromæus ater*, my first care was to try to ascertain how it had come to this Museum. Unfortunately our old catalogues were very badly kept, and although each addition was duly numbered and entered, rarely indeed was any note made of its origin. I easily found out that the skeleton of *D. ater* was first catalogued in 1833 as "*Scheletro del Casoario mas. della Nuova Olanda*," as no. 3623 in the 'Appendice ai Cataloghi di Anatomia Zoologia e Botanica,' vol. ii. p. 37; then as "*Scheletro di Casoario*," no. 467, it was entered in the first 'Catalogo dei Mammiferi' in 1839; and lastly as no. 1673 it got into the 'Catalogo degli Uccelli,' 13th March, 1843. This was not much, and I was pondering over the matter and contemplating the skeleton, which had indeed a centenarian aspect, when I noticed for the first time something written on one of the leg-bones. Cleaning the spot with a brush, I found neatly written, in that clear round hand so common in the earlier years of the 19th century, "*Casoar mde*"; a further application of the brush brought to light a similar inscription on almost every bone, and made it clear that the skeleton came from France. I finally found out that, besides the well-known fact that the Florence Museum was for a while, shortly after Péron's return, a dependency of the French Imperial Household, an exchange of specimens had taken place during the latter days of Cuvier, between 1825-30, between the Paris and Florence Museums, though no list of those specimens has been found. On due consideration, however, I have very little hesitation in identifying the Florence skeleton as the *third* specimen of *D. ater* brought home by Péron in 1804, which has hitherto been unaccounted for.

This precious skeleton is mounted (see fig. 1, p. 7), and, as I have already remarked, has been badly kept, exposed to dust, and has a soiled and ancient aspect. The following portions

Fig. 1.



Skeleton of *Dromæus ater* in the Royal Zoological Museum, Florence.
About $\frac{1}{3}$ nat. size.

are missing and have been replaced by very faithful imitations in wood, evidently copied from those of the perfect mounted skeleton in the Paris Museum; these are the *pectoral arches*, both *wings*, the *patellæ*, two *distal phalanges* in the right foot and *one* in the left, in the hind limbs; besides, in the skull, the *maxillo-jugal* rod is restored in wood, whilst the *palatines*, *pterygoids*, the *vomer*, and the *maxillary processes* of the nasals are missing. The first pair of *cervical ribs* and two *lumbar ribs*, the left one of the first pair and the right one of the second, are also missing.

The right tarso-metatarsal had been fractured, and an irregular ankylosis had been formed during life. The bones are undoubtedly those of a fully adult, I would add of a very old, bird. There are: 20 cervical vertebræ, the last two with movable ribs; 5 dorsal vertebræ, with ribs articulating with the sternum through corresponding sternal ribs; 19 lumbar-sacral vertebræ, the first two with rudimentary or rather short ribs; 8 caudal vertebræ, the last three ankylosed into one mass. The different bones correspond well with the description furnished by A. Milne-Edwards and Oustalet (*op. cit.* p. 65). The height of the Florence skeleton, as it stands, is 1.092 m. I shall now give the separate measurements of the various bones, comparing them with those of the Paris specimen recorded by Milne-Edwards and Oustalet (*op. cit.* p. 66):—

	<i>D. ater</i> , ♂ ad. Florence. m.	<i>D. ater</i> . Paris. m.
Length of vertebral column (following curves)	1.040	1.190
" the cranium (occiput to apex of bill)	0.121	0.170
" " (occiput to frontal suture)	0.065	0.080
Greatest width of the cranium	0.058	0.066
Width of the interorbital space	0.020	0.029?
" " maxillary region	0.035	
" " premaxillary region, 1 centim. from apex	0.016	
Length of the lower jaw	0.111	0.134?
" " sternum (mesial line)	0.093	
" " sternum (following curve)	0.120	0.138
Width of the sternum above (straight line)	0.087	0.120

	<i>D. ater</i> , ♂ ad. Florence. m.	<i>D. ater</i> . Paris. m.
Width of the sternum below (straight line) ..	0·054	0·086
Length of the pelvis (mesial line, curve)	0·270	0·340
From the anterior margin of the acetabulum to anterior iliacal crest	0·083	
From the posterior margin of the acetabulum to the extremity of the ilium	0·127	
From the posterior margin of the acetabulum to the extremity of the pubis	0·135	
From the posterior margin of the acetabulum to the extremity of the ischium.....	0·130	
Width of the pelvis across the posterior margins of the acetabula	0·076	0·092
Width of the pelvis above the acetabula	0·068	0·075
Length of the femur	0·168	0·180
" " tibia	0·300	0·343
" " right fibula (point broken)	0·162	
" " tarso-metatarsal	0·240	0·290
" " external digit (toe)	0·067	0·080
" " median digit	0·106	0·110
" " internal digit (right)	0·070	0·070

Setting aside those measurements which are so apt to vary according to the manner in which they are taken, and which are therefore of little value, what strikes us at once, on looking through the comparative series, is the fact that the Florence specimen—which is an adult, and I may add an old bird and a male (if what is written on almost every bone is correct, and there is no plausible reason for doubt)—is a *notably smaller bird*. Let us for examples take a few measurements in which only one method can be used. Thus the Florence *D. ater* has the femur 0·168, tibia 0·300, tarso-metatarsal 0·240, the middle digit of the foot 0·106 in length; whilst in the Paris specimen the corresponding measurements are: 0·180, 0·343, 0·290, 0·110. The only measurement in which both specimens agree is the length of the internal digit (toe) 0·070. In some instances the measurements, if correct, differ enormously; thus the length of the pelvis along the mesial curve, 0·270 in the Florence specimen, is given as 0·340 in the Paris one.

And now I shall conclude this short contribution to the history of a highly interesting bird, which has so utterly disappeared through the ruthless agency of man, by expressing the hope that we may no longer be guilty of such barbaric vandalism, and that the touching appeal written by Gould to the Australians thirty-five years ago for the preservation of the Larger Emeu may be attended to.

Royal Zoological Museum, Florence,
20th August, 1900.

II.—*On a new Species of Blue Wren from King Island,
Bass Strait.* By A. J. CAMPBELL (Melbourne).

THERE are no more popular and pleasing little birds than the beautiful Blue Wrens of Eastern Australia. The specimens of this form procured on King Island, Bass Strait, by the Expedition of the Field Naturalists' Club of Victoria (in Nov. 1887), were thought by collectors (myself included) to be *Malurus gouldi*. But I have since obtained a series of skins of Blue Wrens from Tasmania and thence to the Tropics, and find the King Island bird to be quite distinct. Its characteristics are that it is the largest of all, and that it has a decidedly darker shade of blue—brilliant ultramarine being the nearest colour. The tail is very dark blue, while there is also quite a wash of blue on the buffy-white under surface beneath the band of velvety black, and on the outer webs of the primaries. The female is similar to that of *M. cyaneus*, but much larger and slightly darker brown in colour, with a bluish tinge on the feathers of the tail.

Out of compliment to my wife, who has greatly assisted me by transcribing and correcting the draft of a work on the 'Nests and Eggs of Australian Birds,' now in the hands of a British publishing firm, I propose the name *M. elizabethæ* for this new variety; but to be known in the vernacular list as the Dark Blue Wren, in contradistinction to Dr. Sharpe's Silvery (Light) Blue Wren (*M. cyanochlamys*), the most northern form.

The greatest favourites about our camps on King Island